

In re Appln. of Helen Biddiscombe
Serial No. 09/763,723
Reply To Office Action Of November 10, 2004

REMARKS

This Amendment is responsive to the Office Action mailed September 30, 2004 wherein the Examiner (a) rejects Claim 28 under 35 U.S.C. § 112 first paragraph as failing to comply with the written description requirement; (b) rejects Claims 21-28 under 35 U.S.C. § 102 as being anticipated by U.S. Patent No. 4,892,779 to Leatherman et al; and (c) rejects Claims 2-5, 8, 9, 12, 13, 15-17, and 20 under 35 U.S.C. § 103(a) as being unpatentable over Leatherman. By this response, Applicant cancels Claim 28, amends Claims 13 and 21, and adds new Claim 29. Applicant respectfully submits that each of the pending Claims 2-5, 8, 9, 12, 13, 15-17, 20-27, and 29 are in a condition for allowance and respectfully requests favorable consideration of the application.

As described in detail in the originally-filed application, the present invention is directed to an in-mold labeled, blow-molded article formed from high density polyethylene, the label being formed from a biaxially oriented polypropylene based voided film having shrinkage of at least 4% in both the machine and transverse directions as measured by the OPMA shrink test. The film comprises a base layer composed of a polypropylene homopolymer and an outer layer of heat sealable polymer. As claimed in Claim 13, the film has a density of more than 0.8 gm/cm³. As further claimed in Claim 21, the film further comprises a void-creating filler selected from the group consisting of chalk and organic polymers and being disposed in the polypropylene homopolymer and wherein the density of the film is less than 0.8gm/cm³.

The Examiner rejected Claims 21-28 under 35 U.S.C. § 102 as being anticipated by U.S. Patent No. 4,892,779 to Leatherman et al and cites Leatherman as anticipating a multilayer

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article, such as an in-mold label for labeling of polyolefin containers, such as high density polyolefin containers. The Examiner further states that the multilayer article comprises at least one layer of microporous material and at least one layer of nonporous material, with the nonporous material formed from a polypropylene, which is a polyolefin and heat sealable. The Examiner further states that the microporous material is formed from ultrahigh molecular weight polypropylene with void creating filler, that in addition to the siliceous filler may include other fillers including organic polymers, which are non-siliceous and employed to form voids. The Examiner then states that "claims 21-28 are written in open claim language and therefore the scope of the claims include not only the filler explicitly claimed, but other fillers as well, such as the siliceous filler taught in Leatherman et al."

Applicant respectfully disagrees with the Examiner's statements, and respectfully submits that Leatherman does not contain each and every element of Claims 21-27. It is well settled that anticipation can only be established by a single prior art reference which identically discloses each and every element of the claimed invention. Anticipation is not shown, even if the differences between the claims and the prior art reference is insubstantial. Instead, the cited reference must show exactly what is claimed. In re Bond, 910 F.2d 831, 15 U.S.P.Q.2d 1566 (Fed. Cir. 1990); Structured Prod. Co. v. Park Rubber Co., 749 F.2d 707, 233 U.S.P.Q. 1264 (Fed. Cir. 1984).

With respect to independent Claim 21, Leatherman does not disclose the void-creating filler disposed in the polypropylene homopolymer. Even though the claim language is open with respect to the cited elements and may contain other elements, the claim language in regard

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to the cited void-creating filler is closed and therefore limits the void-creating filler to a filler selected from the group consisting of chalk and organic polymers. Leatherman does not include chalk or organic polymers as void-creating fillers and therefore, Leatherman does not contain each and every element of the claimed invention and therefore cannot anticipate Claim 21. Irrespective of whether the claim language is open or closed, Leatherman does not disclose a void-creating filler made from chalk or organic polymers and therefore does not anticipate Claim 21. Dependent Claims 22-27 include additional limitations that further define over Leatherman and therefore are also not anticipated by Leatherman.

In specific regards to Claims 26 and 27, the Examiner states that in Leatherman, the microporous material layers further comprise organic extraction liquids including 1,2 - dichlorethane, 1,1,1-trichloroethane or 1,1,2 - trichloroethane. The Examiner states that saturated hydrocarbons such as chlorethanes are structurally equivalent to hydrocarbons that are fully hydrogenated because they do not contain any higher bonds than a single bond and therefore, Leatherman anticipates a base layer and intermediate layer containing a hydrogenated hydrocarbon resin.

Applicant respectfully disagrees with the Examiner's statements related to Claims 26 and 27. The organic extraction liquids are liquids, as disclosed in Leatherman, and while at room temperature, hydrogenated hydrocarbon resin, as claimed in Claim 26 is a solid and of high molecular weight. Therefore, hydrogenated hydrocarbon resin cannot be used as a solvent as disclosed in Leatherman and therefore, the present invention and is not structurally equivalent, as asserted by the Examiner. Furthermore, as stated in Claims 26 and 27, the layers contain the

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hydrogenated hydrocarbon resin and wherein in Leatherman, as disclosed in Col. 7, lns. 18-24, a second extraction zone removes the residual organic extraction liquid with steam or water. The sheet is then passed through a forced air dryer for removal of any residual water and organic extraction liquid. Therefore, Leatherman teaches the removal of the organic extraction liquids, which is directly opposed to the present invention, which claims the inclusion of a hydrogenated hydrocarbon resin. Therefore, Leatherman further cannot anticipate Claims 26 and 27, which contain additional limitations and further define over independent Claim 21.

Given that Leatherman does not disclose each and every element of Claims 21-27, Applicants respectfully request withdrawal of this rejection. Applicants also respectfully submit that the subject matter of the amended claims is not obvious over Leatherman because does not teach, suggest or disclose the subject matter of Claims 21-27 and there is no motivation in the art for modifying Leatherman to obtain the subject matter of Claims 21-27.

The Examiner also rejected Claims 2-5, 8, 9, 12, 13, 15-17, and 20 under 35 U.S.C. § 103(a) as being unpatentable over Leatherman. Applicants respectfully traverse this rejection as conceivably applied to the claims.

Leatherman is directed to a microporous film while the present invention is directed to a voided film. Applicant respectfully submits that microporous films and voided films are completely different, and that the present invention solves a problem with voided films that is generally not a problem with microporous films. As used in the present invention, and in Claims 13 and 21, voided refers to a closed cell matrix of voids, wherein the film used in Leatherman is a microporous film which includes interconnected pores allowing gas to pass

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through. Applicant respectfully submits that voided films and microporous films are different in nature and each have unique problems. More specifically, the term voided refers to a closed cell in a polymer matrix, which lowers the film's density, but does not make the film porous, such as being permeable. The present invention is directed to voided films, which are substantially non-porous and therefore substantially non-permeable. As disclosed in the specification, one of the primary problems the present invention overcomes is the "orange peel" effect with voided films. Applicant respectfully submits that "orange peel" effect does not generally happen with microporous films, as disclosed in Leatherman, since blistering generally does not occur with porous layers. In microporous films, the porous nature allows gas to pass through the film, thereby eliminating the problem with "orange peel" or blistering. Therefore, there is no motivation in Leatherman to control the shrinkage rates as defined in the claims in order to reduce blistering.

Furthermore, Applicant respectfully submits that Leatherman does not teach or suggest the present invention of the pending claims. Leatherman is directed to a multilayer article comprising material which is impervious to the passage of gas and bacteria, fusion bonded to microporous material (Col. 1, Lns 16-20). The microporous layer is printed (Col. 11, Ln. 55 through Col. 12, Ln. 51), and then fusion bonded to at least one layer of substantially nonporous material (Col. 12, Lns. 52 and 53). The substantially nonporous material is most often in the form of sheet, film, foil, ... plates, bars, rods, and tubs. (Col. 13, Lns. 1-3). Examples of thermoplastic materials which are suitable for use include high density polyethylene (Col. 13, Lns. 4-6).

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In regards to Claim 13, Leatherman does not teach or suggest the use of a polyethylene article, bonded to a label formed of a film having a base layer formed from polypropylene homopolymer and an outer layer formed from a heat sealable polymer. The Examiner asserts that in the embodiment where the microporous material is in more than one layer, the microporous material is the base layer and an intermediate layer, while the non porous material is at least an outer layer. Applicant respectfully disagrees with the Examiner's statement and submits that even as suggested by the Examiner, Leatherman does not teach or disclose the present invention as claimed in amended Claim 13. Applicant admits that the nonporous layer referred to in Leatherman may be similar to the blow-molded article formed from high density polyethylene, however disagree that the label that is in-mold bonded to the article is the same as the microporous layer in Leatherman or that the microporous layer in Leatherman teaches or suggests the label as claimed in amended Claim 13. If the nonporous layer in Leatherman is the article in amended Claim 13, it cannot act as the outer layer as claimed in Claim 13. Even if the nonporous layer as suggested by the Examiner could be considered the outer layer of amended Claim 13, then Leatherman would not disclose the article to which the label, formed from a biaxially oriented polypropylene based voided film, is attached. Nothing in Leatherman discloses, teaches or suggests the in-mold labeling of a blow-molded article formed from high density polyethylene with a label formed from a biaxially oriented polypropylene based voided film having a base layer composed of polypropylene homopolymer and an outer layer composed of a heat sealable polymer. More specifically, Leatherman does not teach or suggest the in-mold labeling of a label having the two claimed layers to an article. Furthermore, there is no

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motivation in Leatherman or in the art for modifying Leatherman to get the subject matter of amended Claim 13.

Applicant respectfully submits that the dependent claims provide further limitations that define over Leatherman. As discussed above in relation to Claims 26 and 27, the organic extraction liquids are liquids, as disclosed in Leatherman, and while at room temperature, hydrogenated hydrocarbon resin, as claimed in the claims depending from Claim 13, is a solid and of high molecular weight. Therefore, hydrogenated hydrocarbon resin cannot be used as a solvent as disclosed in Leatherman and therefore, the present invention and is not structurally equivalent, as asserted by the Examiner. Furthermore as claimed in Claim 12, the layers contain the hydrogenated hydrocarbon resin and wherein in Leatherman, as disclosed in Col. 7, lns. 18-24, a second extraction zone removes the residual organic extraction liquid with steam or water. The sheet is then passed through a forced air dryer for removal of any residual water and organic extraction liquid. Therefore, Leatherman directly teaches away from the inclusion of hydrogenated hydrocarbon resin, even if such was equivalent to the organic extraction liquids, as suggested by the Examiner.

Applicant respectfully submits that the Examiner's rejection of Claim 28 under 35 U.S.C. § 112 first paragraph has been overcome by the cancellation of Claim 28. Applicant respectfully submits that new Claim 29 defines over Leatherman and therefore is in a condition for allowance. Claim 29 is directed to a blow molded article labeled in-mold with a label formed from a biaxially oriented polypropylene based voided film having a shrinkage of at least 4% in both the machine and transverse direction, wherein the film includes a base layer

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composed of polypropylene homopolymer, a void creating filler disposed in the polypropylene homopolymer and an outer layer comprising a heat sealable polymer.

In view of the above remarks and the revised claims, Applicant submits that each of the pending claims define an invention that is patentable over the prior art.


Prompt and favorable consideration of this amendment is respectfully requested.

Respectfully submitted,

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